REMARKS

Claims 1-3 14, 15, 28-31, 34, 38, 40-44, 46-53, 59, 61-67, 73, 74, 76-79, 82, 84-89 and 91-93 have been amended. Claims 2, 3, 14, 28-31, 34, 38, 40-44, 46-52, 64-67, 73, 74, 76-79, 84, 86-89 and 91-93 were amended for better form. Claims 39 and 68 have been canceled without prejudice. New claims 94-102 have been added. Claims 1-38, 40-67 and 69-102 are pending in the application.

The amendments to the original claims, including claims 1 and 85, are supported by the application as filed. (See, e.g., Figure 1A (illustrating at least one intermediate power system element in space); Figure 1A and page 18, lines 14-25 (plurality of power system elements in space having control system components); Figure 1A; page 18, line 14 - page 19, line 17 (illustrating and describing communications between control system components of adjacent power system elements, e.g., between mirrors 2 and 4, between mirrors 4 and 5); p. 9, lines 22 - p. 10, line 6; p. 18, line 14 - p. 19, line 23 (power system elements in space include control system components); Figure 1A; page 18, lines 14-25 (describing proximity control system that includes components on different power system components or a distributed control system).

New claims 94-96 call for limitations directed to the control system maintaining optical alignment of power system elements that are free-floating in space. The specification as filed supports these new claims. (See, e.g., Figures 1A-B) (illustrating alignment of mirror / optical elements); (page 11, line 16 - page 12, line 25) (describing alignment of optical components and "mirrors 2 and 4 remain in alignment").

New claims 97-99 call for limitations directed to one or more power system elements reflecting selected wavelengths of incident sunlight. The specification as filed supports these new claims. (See, e.g., Figures 1A-B (illustrating incident sunlight); p. 11, lines 4-15 (describing optical coatings that reflect selected portions of sunlight 1 e.g., particular wavelengths)).

New claims 100-102 call for limitations directed to all of the power system elements are in space and none of the power system elements are in an atmosphere or airborne. These specification as filed supports these new claims. The specification throughout refers to a space-based power system and components in space, as opposed to components that are not in space (e.g., on ground or airborne and in an atmosphere).

The specification has been amended to address the formalities identified on page 2 of the Office action. Applicants submit a proposed correction to Figure 11, including reference number "19" identifying a phased-array antenna, consistent with the specification.

Applicants also submit a corrected Figure 11 incorporating this correction. Accordingly, the Applicants respectfully request that the objections to the specification and drawings on page 2 of the Office action be withdrawn.

Claim 68 has been canceled without prejudice. Accordingly, the Applicants respectfully request that the double patenting objection on pages 2-3 of the Office action be withdrawn.

Claim 39 has been canceled without prejudice. Accordingly, the Applicants respectfully request that objection under 37 CFR 1.75(c) be withdrawn.

I. Claims 15, 23, 24, 59, 61-63 and 82 Particularly Point Out and Distinctly Claim The Subject Matter Regarded as the Invention.

Claims 15, 23 and 24 were amended to refer to "reflective" rather than "reflecting" as requested in the Office action. Claim 59 has been amended to refer to "the power module" rather than "the photovoltaic module." Claim 61 has been amended to recite "the power module" rather than "the photovoltaic module." Claim 62 has been amended to refer to "the reflective mirror" as requested in the Office action. Claim 63 has been amended to refer to "reflective" as requested in the Office action. Claim 82 has been amended to refer to "electrical energy."

Accordingly, the Applicants respectfully request that the rejection under 35 U.S.C. 112 ¶2 be withdrawn.

II. Claims 1, 2, 11-13, 25-35, 37-38, 49, 51, 52, 85-89, 92 and 93 Are Novel Over Henderson.

Independent claims 1 and 85 and respective dependent claims 2, 11-13, 25-35, 37-39, 49, 51, 52, 85-88, 92 and 93 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,368,415 to Henderson ("Henderson"). A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference MPEP § 2131. The Applicants respectfully traverse the rejection, however, in order to expedite prosecution of the application, the Applicants offer amendments to independent claims 1 and 85 and the following remarks.

The Henderson patent fails to disclose or suggest a number of limitations of Applicants' independent claims 1 and 85.

Initially, Henderson is fatally deficient since it fails to disclose or suggest the "in space" limitations of claims 1 and 85. For example, claim 1 calls for a plurality of power system elements "in space," at least one intermediate power system element "in space" that receives sunlight from one power system element "in space" and transmits the sunlight to another power system element "in space"; and the plurality of power system elements "in space" including a control system component. Claim 85 has similar "in space" limitations.

It is well known that space is fundamentally different than an atmosphere. The Earth's atmosphere is a gaseous mass or envelope that surrounds Earth and that is retained by a gravitational field. The atmosphere can be used to keep a hot air balloon afloat, as described in Henderson. Space, on the other hand, is generally known to be the expanse in which the solar system, stars, the moon and galaxies exist. In other words, it is well known that space is above and beyond Earth's atmosphere.

Henderson describes a satellite that is in space and in geosynchronous orbit, and an aircraft or hot air balloon 1 (described as an intermediate platform) that is airborne or air buoyant in the atmosphere. Thus, contrary to the Office action assertions, only the satellite is in space, not the hot air balloon 1. This conclusion is consistent with the description provided by Henderson, as discussed below.

Henderson describes a power conversion system that includes a satellite in space and a "hot air balloon" 1, which is described as an "aircraft" or intermediate platform that is airborne or air buoyant in the atmosphere at stratospheric altitudes. Henderson explains that a crew can be on board the hot air balloon 1. Further, all areas of the craft are at ambient pressure. (Henderson, Abstract; col. 1, line 27 - col. 2, line 8; col. 2, line 8 ("hot air balloon"); col. 2, line 35 (ambient pressure); col. 2, line 44 (balloon is an aircraft); col. 4, lines 20-22).

The hot air balloon 1 uses hot air in the atmosphere in order to obtain lift and remain afloat. A laser powered engine is used to control elevation and altitude of the hot air balloon 1. (Henderson, col. 1, line 65 - col. 2, line 2). More particularly, the hot air balloon 1 ascends by solar-heated air from a water or ground-assembly site to controlled altitudes in the stratosphere. (Henderson, col. 1, lines 66-68; col. 2, lines 35-38).

The satellite, in contrast, is in geosynchronous orbit in space, well beyond the hot air balloon 1. (Henderson, col. 3, line 15). The satellite includes a solar array 10 that drives lasers 11, the outputs of which are directed towards a transmission mirror 12. The mirror 12 is controlled to direct a beam to a balloon collector 2. The satellite includes a rocket guide system 13 and receiver 14 for receiving command signals from the balloon 1. (Henderson, col. 3, lines 33-48).

The hot air balloon receives laser energy beamed to it from the satellite in space. This energy is converted into microwave energy, which is transmitted by the hot air balloon in the atmosphere down to a rectenna on Earth. (Henderson, col. 1, lines 60-64). More particularly, at the hot air balloon 1, laser energy is collected by collectors 2 and converted to electrical power by a generator 16 and passed to a microwave generator 17 that generates microwave energy. The microwave energy is defocused and transmitted to Earth.

Considering the description in Henderson, construing the hot-air balloon as being in space as asserted in the Office action is contrary to the distinction between space and the atmosphere provided by Henderson and the manner in which a satellite and hot-air balloon operate in these different environments. For example, a satellite, which is in geosynchronous orbit in space, would not be in geosynchronous orbit in the Earth's atmosphere. Further, if the hot air balloon described in Henderson were placed in space, the hot air balloon would be destroyed or inoperable as an intermediate platform since it would not be air buoyant (due to the absence of hot air) or be destroyed. Clearly, the hot air balloon is not "in space." This conclusion is also consistent with Henderson who explains that the balloon requires hot air and that a crew can be aboard the balloon.

Considering the forgoing remarks, the Applicants respectfully submit that Henderson clearly fails to disclose or suggest the "in space" limitations of independent claims 1 and 85. Thus, all of the Office action assertions regarding Henderson fail on this basis alone. Henderson, however, has additional deficiencies.

The Applicants respectfully submit that Henderson also fails to disclose or suggest "a plurality of power system elements in space, the plurality of power system elements including at least one intermediate power system element in space" as recited in independent claims 1 and 85. In contrast, Henderson discloses a satellite in space. Thus, there is no intermediate power system

element in space. Accordingly, Henderson is clearly deficient with regard to amended independent claims 1 and 85.

Additionally, the Applicants respectfully submit that Henderson fails to disclose or suggest "at least one intermediate power system element that receives sunlight from one power system element in space and transmits the sunlight to another power system element in space" as recited in independent claims 1 and 85. No such configuration or relationship is disclosed or suggested by Henderson. As previously discussed, Henderson lacks an intermediate power system element in space. Further, the satellite receives sunlight in space transmits a laser (not sunlight) to a hot air balloon in the atmosphere (not space), which transmits microwaves to a rectenna. Henderson is, therefore, clearly deficient in this regard.

Moreover, the Applicants respectfully submit that Henderson fails to disclose or suggest "the distributed control system maintains alignment of the free-floating elements based on communications between control system components of adjacent power system elements" as recited in claim 1 and the related limitation of claim 85. While Henderson explains that the satellite includes a retro-rocket guide system 13 and a receiver 14 for receiving signals from the balloon 1, the hot air balloon is not in space. Rather, only the satellite is in space. Moreover, Henderson also explains that the position of the balloon is controlled using an inertial navigation system, radar, or satellite navigation, and that the balloon thrusters may be controlled by a on-board crew or a command link from the ground. Henderson also fails to disclose or suggest a distributed control system and the plurality of power system elements in space including a control system component. No such configuration is disclosed or suggested by Henderson.

Additionally, the Applicants note that Henderson does not disclose or suggest that individual elements of the satellite can be dismantled or separated so that one or more elements are free floating, at least one intermediate power system element receives sunlight and transmits sunlight to another power system element, a plurality of power system elements including a control system component of a distributed control system, or that the distributed control system maintains alignment of the free-floating power system elements based on communications between control system components of adjacent power system elements.

Based on the forgoing amendments and remarks, the Applicants respectfully request that the rejection of independent claims 1 and 85 under 35 U.S.C. §102(b) be withdrawn. Further, the Applicants respectfully submit that dependent claims 2, 11-13, 25-35, 37-39, 49, 51, 52, 85-88,

92 and 93, which depend from and incorporate all of the elements and limitations of respective independent claims 1 and 85 and add novel and non-obvious limitations thereto, are also novel over Henderson.

Moreover, the Applicants respectfully submit that Henderson fails to disclose or suggest the subject matter of various dependent claims. For example, the Office action asserts that Henderson discloses the subject matter of claims 11 and 13, which include limitations directed to transmitting energy to a pre-determined location of a space station or satellite. Henderson, in contrast, describes transmitting microwave energy to Earth. (See, e.g., Henderson, col. 1, lines 57-64; Figure 1). Thus, Henderson fails to disclose or suggest the elements and limitations of claims 11 and 13.

Further, the Office action identifies the hot-air balloon 1 or intermediate platform, and asserts that Henderson discloses "wherein the elements are maintained in an orbit" as called for by claim 49. As previously discussed, only the satellite is in geosynchronous orbit, not the hot-air balloon 1. (Henderson, col. 2, lines 35-45; col. 3, line 15). Thus, Henderson fails to disclose or suggest the elements and limitations of claim 49.

Additionally, since only the satellite is in space, Henderson does not disclose or suggest the limitations of claims 51, 52, 92 and 93, which call for a majority or all of the plurality of power system elements being free-floating in space. Further, Henderson does not disclose or suggest that a majority or all of the individual satellite components are free-floating in space. Thus, Henderson fails to disclose or suggest the elements and limitations of claims 51, 52, 92 and 93.

Applicants respectfully submit that new dependent claims 94, 96, 97, 99, 100, and 102 which depend from and incorporate all of the elements and limitations of respective independent claims 1 and 85, are also novel over Henderson.

III. Claims 1-13, 25-52, and 85-93 Are Patentable Over Henderson.

Claims 1-13, 25-52 and 85-93 were rejected under 35 U.S.C. §103(a) as being unpatentable over Henderson. To establish a prima facie case of obviousness of a claim under 35 U.S.C. §103(a), all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art. MPEP §2143.03. Moreover, there must be some suggestion or motivation to modify the reference. MPEP §2143.01 The Applicants respectfully submit that Henderson cannot support the rejection in view of these and other requirements.

The Applicants respectfully submit that there is no suggestion or motivation to modify the system described in Henderson to derive the systems recited in Applicants' claims considering the fatal deficiencies of Henderson, described above, and the additional components, substantial modifications, and coordination of free-floating components that would be required. The required suggestion or motivation is simply lacking.

Accordingly, the Applicants respectfully request that the rejection of claims 1-13, 25-52, and 85-93 under 35 U.S.C. §103(a) be withdrawn.

Further, Henderson teaches away from the "in space" limitations of the rejected claims and claims 100 and 102 since the hot air balloon or intermediate platform is in the atmosphere, not in space.

IV. Claims 1, 2, 11, 12, 25-34, 37, 38, 40-44, 49-52, 85-88, and 91-93 Are Novel Over Mikami.

Independent claims 1 and 85 and respective dependent claims 2, 11, 12, 25-34, 37, 38, 40-44, 49-52, 85-88 and 91-93 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application No. Publication No. 2001/0035207 to Mikami et al. ("Mikami"). The Applicants respectfully traverse the rejection, however, in order to expedite prosecution of the application, the Applicants offer the above amendments and the following remarks.

Initially, the Applicants respectfully submit that Mikami fails to disclose or suggest "the plurality of power system elements including at least one intermediate power system element in space that receives sunlight from one power system element and transmits the sunlight to another power system element in space" and power system elements that "convert the electrical energy

into a form for transmission to a pre-determined location" as recited in independent claims 1 and 85.

In contrast, Mikami specifically describes a plurality of power satellites #1, #2, #n, all of which independently collect sunlight and independently transmit microwaves directly to a destination, i.e., the power base 4 on the ground, the moon or a space plant facility. (Mikami, Paras. 0023 and 0024). More particularly, Mikami describes a system that includes a control satellite 2 and a plurality of power satellites #1, #2, #N. The power satellites transmit microwave energy to an antenna 3, which converts the microwaves into low frequency waves that are used as electric power by the power base 4 on the ground, moon or space plant facility. A satellite communications antenna 5 is used for communications between the power base 4 and the control satellite 2 which, in response to the signals from the base 4, controls the phase of the power satellites 1. (Mikami, Paras. 0022, 0024).

Thus, there is no intermediate power system element that receives sunlight and transmits sunlight to another power system element in space. Rather, each power satellite described in Mikami independently receives sunlight but then independently transmits microwaves to a destination, i.e., it does not transmit sunlight to another power system element. Further, the control satellite does not receive or transmit sunlight to another satellite. Mikami is clearly deficient in this regard and cannot support the rejection.

Further, the Applicants respectfully submit that Mikami does not disclose or suggest "the distributed control system maintains alignment of the free-floating elements based on communications between control system components of adjacent power system elements" as recited in independent claim 1 and the related "maintaining" limitation of independent claim 85. In contrast, Mikami describes a centralized control system, i.e., a centralized control satellite 2, which catches a beacon signal from the base 4, and controls each power satellite 1. (Mikami, Paras. 0022, 0025, 0026). The power satellites do not include components that control or communicate with each other.

More particularly, Mikami explains that when the plurality of power satellites 1 independently transmit microwaves, these microwaves may balance each other out or they may be transmitted in a direction different from a desired direction, (towards the electric power base 4). The central control satellite 2 controls each power satellite 1 by changing its attitude in space, and its relative location therefore changes. (Mikami, Para. 0023). More specifically, phase

adjustments are made to the microwaves transmitted by power satellites 1 so that the microwaves are in phase with one another. Phase adjustments are performed on the microwaves transmitted by the power satellites 1 as shown in Figure 2. Plates #1, #2, and #n are the front surfaces of antennas of power satellites #1, #2, and #n, respectively. The control satellite 2 receives a beacon signal 5 from the base 4, and recognizes the direction of the base 4. The control satellite 2 defines a virtual plane S orthogonal to the direction, and determines a relationship between the virtual plane S and antenna front surfaces #1, #2, and #n to calculate the amount of phase adjustment that is necessary. (Mikami, Para. 0026).

The control satellite 2 specifies the location of each power satellite 1 or each of the plurality of antenna front surfaces by measuring distances between the control satellite 2 and three points located on each of the plurality of power satellites 1 or each of the plurality of antenna front surfaces. The control satellite 2 then determines a difference between each of the plurality of antenna front surfaces and the virtual plane S from the virtual plane S and the location of each of the plurality of antenna front surfaces. These calculations are used to adjust the orientation of each antenna front surface. Thus, the control satellite 2 can calculate the amount of phase adjustment to be made to the microwave which each of the plurality of power satellites 1 will transmit. Part of the phase calculation functionality can be included in each of the plurality of power satellites. (Mikami, Paras. 0026, 0027).

Additionally, the Applicants note that Mikami does not disclose or suggest that individual elements of the satellite can be dismantled or separated so that one or more elements are free floating, at least one intermediate power system element receives sunlight and transmits sunlight to another power system element, a plurality of power system elements including a control system component of a distributed control system, or that the distributed control system maintains alignment of the free-floating power system elements based on communications between control system components of adjacent power system elements.

Correspondingly, the Applicants respectfully submit that these deficiencies cannot support the requirements for a rejection under 35 U.S.C. §102(b). Thus, the Applicants respectfully request that the rejection of independent claims 1 and 85 under 35 U.S.C. §102(b) be withdrawn. Further, the Applicants respectfully submit that dependent claims 2, 11, 12, 25-34, 37-44, 49-52, 86-88 and 91-93, which depend from and incorporate all of the elements and

limitations of respective independent claims 1 and 85 and novel and non-obvious limitations thereto, are also patentable over Mikami.

Moreover, the Applicants respectfully submit that there is no suggestion or motivation to modify the system described in Mikami to derive the system recited in Applicants' claims considering the substantial changes involved. Mikami is specifically directed to power satellites that transmit power directly to a destination, not using an intermediate power system element, transmitting sunlight to another power system element, and then transmitting energy to a destination. Further, Mikami is specifically directed to a central control satellite, not a distributed control system.

Mikami also fails to disclose or suggest the subject matter of various dependent claims. For example, the Office action asserts that Mikami discloses the limitations of claims 30 and 87, which call for the control system adjusting a shape of a power system element. The Applicants respectfully submit that Mikami does not disclose or suggest this limitation since Mikami merely explains that the control satellite 2 controls the amount of phase adjustment to be made to the microwave which each power satellite will transmit. Each of the plurality of antenna front surfaces #1, #2 and #n has six degrees of freedom so that the control satellite can specify the location of each power satellite or the orientation of each antenna front surface. (Mikami, paras. 0025 and 0026).

Additionally, the Applicants respectfully submit that Mikami does not disclose or suggest maintaining alignment using a laser interference pattern to determine whether a power system element should be aligned, as called for by claims 91.

The Applicants also respectfully submit that new claims 94, 96, 97, and 99, which depend from respective independent claims 1 or 85 and add novel and non-obvious limitations thereto, are also patentable over Mikami.

Further, the Applicants respectfully submit that Mikami fails to disclose or suggest "wherein the control system maintains optical alignment of a plurality of power system elements that are free-floating in space" as called for by claims 94 and 96. Rather, Mikami explains that each power satellite is controlled and operated independently of other power satellites, by a central control satellite, not by using optical alignment.

The Applicants also respectfully submit that Mikami fails to disclose or suggest "wherein one or more power system elements reflect selected wavelengths of incident sunlight" as called for by claims 97 and 99.

Additionally, the Applicants respectfully submit that Mikami fails to disclose or suggest and teaches away from "the control system being a distributed control system" since the control system used in Mikami is a central control satellite, which independently controls each power satellite.

V. Claims 1-34, 37, 38, 40-67, 69, 70, 73-81, and 83-93 Are Patentable Over Mikami in View of Keigler.

Independent claims 1, 53 and 85 and respective dependent claims 2-34, 37, 38, 40-52, 54-67, 69, 70, 73-81, 83, 84, and 86-93 were rejected under 35 U.S.C. §103(a) as being unpatentable over Mikami in view U.S. Patent No. 4,371,135 to Keigler ("Keigler").

Keigler, however, clearly does not cure the deficiencies of Mikami, as discussed above and has its own deficiencies. The asserted combination of Mikami and Keigler, therefore, cannot support a rejection of the claims under 35 U.S.C. §103(a). Further, the Applicants respectfully disagree that Keigler describes mirrors 20 and 22 as asserted in the Office action. Rather, Keigler explains that a planar mirror 20 has a reflecting surface 22. (Keigler, col. 2, lines 57-58).

Additionally, the Applicants note that Mikami and Keigler, individually or in combination, do not disclose or suggest that individual elements of the satellite can be dismantled or separated so that one or more elements are free floating, at least one intermediate power system element receives sunlight and transmits sunlight to another power system element, a plurality of power system elements including a control system component of a distributed control system, or that the distributed control system maintains alignment of the free-floating power system elements based on communications between control system components of adjacent power system elements.

There is also no suggestion or motivation to combine Mikami and Keigler. As previously discussed, Mikami describes a central control satellite 2 that catches the beacon signal from the base 4 to independently control and adjust the position and/or phase of a plurality of independent power satellites. (Mikami, paras. 0025 and 0026). This configuration is at odds with Keigler,

who describes the use of a mirror 30 that is fixed, and a mirror 20 that is maintained at a constant orientation to the sun in an orbit. (Keigler, col. 1, line 65 - col. 2, line 3; col. 3, lines 61-64).

More particularly, a platform 10 that is supported by a spacecraft or a satellite and oriented so that the face 12 carrying microwave antennas 14 is continuously facing a fixed location on the earth. (Keigler, col. 2, lines 37-54). A mirror 20 is rotatable on a shaft 26. Sun rays 28 are reflected from the mirror 20 to the fixed mirror 30. The fixed mirror 30 is disposed at an angle so that rays along a first reflection path 32 from the mirror 20 travel along a second reflection path 34 to solar cells 18 for producing D.C. signals. (Keigler, col. 2, lines 37 - col. 3, line 7).

Additionally, Keigler teaches away from "a distributed control system, the plurality of power system elements in space including a control system component." Rather, Keigler describes a fixed mirror 30 that rotates about the orbit axis once per orbit period, while rotating mirror 20 makes one revolution per orbit about its shaft 26. (Keigler, col. 3, lines 56-68).

Based on the forgoing amendments and remarks, the Applicants respectfully submit that the asserted combination of Mikami and Keigler cannot support a rejection of claims 1-34, 37, 38, 40-67, 69, 70, 73-81, and 83-93 under 35 U.S.C. §103(a). Thus, the Applicants respectfully request that the rejection under §103(a) based on Mikami and Keigler be withdrawn.

Further, the Applicants also respectfully submit that new claims 94-102, which depend from respective independent claims 1, 53 and 85 and add novel and non-obvious limitations thereto, are also patentable over Mikami and Keigler.

VII. Claims 1-34, 37, 38, 40-67, 69, 70, 73-81, and 83-93 Are Patentable Over Mikami in View of Keigler and Glaser.

The only remaining rejection is a rejection of independent claims 1, 53 and 85 and respective dependent claims 2-34, 37, 38, 40-52, 54-67, 69, 70, 73-81, 83, 84, and 86-93 under 35 U.S.C. §103(a) over Mikami in view of Keigler and Glaser. Glaser does not cure the previously described deficiencies of Mikami and Keigler and has its own deficiencies.

Additionally, the Applicants note that Mikami, Keigler and Glaser, individually or in combination, do not disclose or suggest that individual elements of the satellite can be dismantled or separated so that one or more elements are free floating, at least one intermediate power system element receives sunlight and transmits sunlight to another power system element,

a plurality of power system elements including a control system component of a distributed control system, or that the distributed control system maintains alignment of the free-floating power system elements based on communications between control system components of adjacent power system elements.

Further, there is no suggestion or motivation to make the asserted combination considering that Glaser describes components in space that are not free floating but are, instead, tethered or connected together via support member 16 or cables 44a and 44b.

Glaser describes an apparatus that uses a collector 15 that is attached to a satellite 10 via a support member 16. Connection wires 22 and 23 extend through the support 16. The satellite 10 includes attitude control means 31, and the collector 15 includes attitude control rockets 24. (Glaser, col. 3, line 53 - col. 4, line 26). Other embodiments also describe the use of cables 44a and 44b to join components. (Glaser, col. 4, lines 27-32).

Thus, Glaser teaches away from limitations of independent claims 1, 53, and 85 directed to one or more of the elements of the plurality of power system elements being free-floating since a support member 16 or cables 44a and 44b tether components together. Further, Glaser teaches away from dependent claims 51, 52, 83, 84, 92 and 93, which call for a majority or all of the plurality of power system elements being free-floating in space.

Based on the forgoing amendments and remarks, the Applicants respectfully submit that the asserted combination of Mikami, Keigler and Glaser cannot support a rejection of claims 1-34, 37, 38, 40-67, 69, 70, 73-81, and 83-93 under 35 U.S.C. §103(a). Thus, the Applicants respectfully request that the rejection under §103(a) based on Mikami, Keigler and Glaser be withdrawn.

Further, the Applicants also respectfully submit that new claims 94-102, which depend from respective independent claims 1, 53 and 85 and add novel and non-obvious limitations thereto, are also patentable over Mikami and Keigler. Glaser also teaches away from claims 94-96, which include limitations directed to the control system maintaining optical alignment of a plurality of power system elements that are free-floating in space since a satellite includes components that are connected together via support member 16.

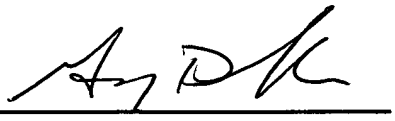
VIII. CONCLUSION.

Based on the forgoing amendments and remarks, the Applicants respectfully submit that the application is in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case. If there are any remaining issues that can be resolved by telephone, Applicants invite the Examiner to contact the undersigned at the number indicated below.

Respectfully submitted,

BINGHAM McCUTCHEN, LLP

Dated: October 25, 2004

By: 

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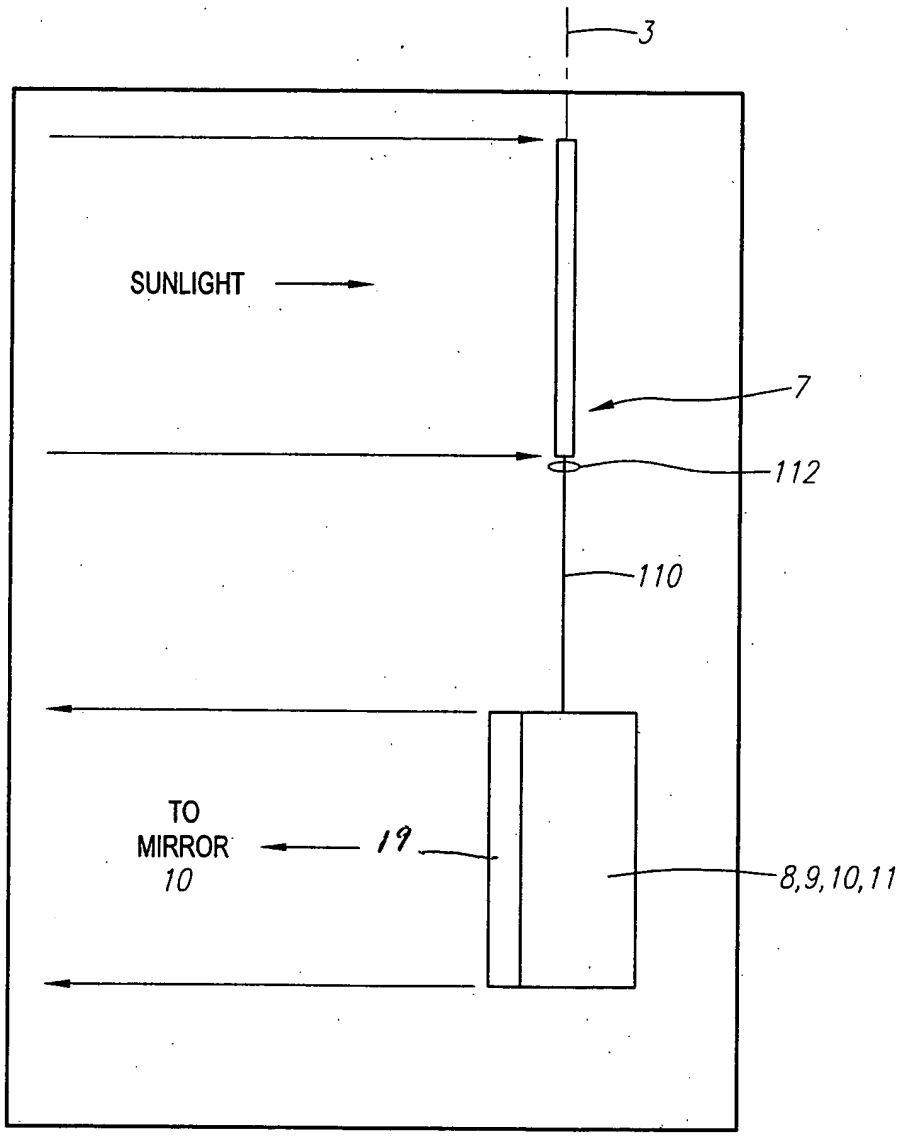

FIG. 11